

PATENT COOPERATION TREATY

REC'D 22 JUL 2005

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 387978003WO0		Date of mailing (day/month/year) 20 JUL 2005
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/US04/20363	International filing date (day/month/year) 25 June 2004 (25.06.2004)	Priority date (day/month/year) 27 June 2003 (27.06.2003)
International Patent Classification (IPC) or both national classification and IPC IPC(7): A61K 35/78 and US Cl.: 424/725		
Applicant HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Susan D. Coe <i>mana j. talson</i> Telephone No. (571) 272-1600
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WRITTEN OPINION OF THE
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International application No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>6-8, 24, 38, 39, 42-44</u>	YES
	Claims <u>1-5, 9-23, 25-37, 40, 41</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-42</u>	NO
Industrial applicability (IA)	Claims <u>1-42</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Please See Continuation Sheet

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:

Claims 1-5, 9-19, 22-23, 28-30, 32-37, 40 and 41 lack novelty under PCT Article 33(2) as being anticipated by US Pat. No. 6,153,208.

US '208 teaches cosmetic compositions that can contain black cohosh (*Cimicifuga racemosa*) and astragalus root (*Astragalus membranaceus*) (see col. 42, line 64 and col. 44, line 29). The reference does not teach that the cosmetics increase telomerase; however, this activity would be inherent because the same composition is contacted with the same tissues and cells as claimed.

Claims 6-8, 24-27, 38, and 39 lack an inventive step under PCT Article 33(3) as being obvious over US Pat. No. 6,153,208.

The teachings of the reference are discussed above. The reference does not teach all of the characteristics of claims 6-8, 24-27, 38 and 39. However, the limitations taught in these claims are considered to be result effective variables that would be within the skill and knowledge of a person of skill in the art to optimize. Thus, the limitations in these claims are considered to be an obvious modification of what is taught in the reference.

Claims 12-14, 18-20, 23, 27-29 and 31 lack novelty under PCT Article 33(2) as being anticipated by US Pat. Pub. No. 2002/0182272.

US '272 teaches a method of treating HIV using an extract from *Astragalus spinosus* (see claims 1 and 10). The reference does not teach that the method increases telomerase; however, this activity would be inherent because the same composition is contacted with the same tissues and cells as claimed.

Claims 24-26 lack an inventive step under PCT Article 33(3) as being obvious over US Pat. Pub. No. 2002/0182272.

The teachings of the reference are discussed above. The reference does not teach all of the characteristics of claims 24-26. However, the limitations taught in these claims are considered to be result effective variables that would be within the skill and knowledge of a person of skill in the art to optimize. Thus, the limitations in these claims are considered to be an obvious modification of what is taught in the reference.

Claims 12, 18-21, 23, 25-28, 31, and 32 lack novelty under PCT Article 33(2) as being anticipated by US Pat. No. 5,916,565.

US '565 teaches a method of treating arthritic joint pain using a composition comprising black cohosh (*C. racemosa*) (see claims). The reference does not teach that the cosmetics increase telomerase; however, this activity would be inherent because the same composition is contacted with the same tissues and cells as claimed.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Claims 12-15, 17-21, 23, and 28-31 lack novelty under PCT Article 33(2) as being anticipated by CN 1383853 (English abstract).

CN '853 teaches a method of treating arthritis using a composition comprising astragalus root (*A. membranaceus*). The reference does not teach that the cosmetics increase telomerase; however, this activity would be inherent because the same composition is contacted with the same tissues and cells as claimed.

Claims 13-17 and 24-27 lack an inventive step under PCT Article 33(3) as being obvious over US Pat. No. 5,916,565 in view of CN 1383853.

As discussed above, both of these references teach using black cohosh and astragalus root individually to treat arthritis. It is well known that it is considered obvious to combine two or more ingredients together into one composition when they are known to be used for the same purpose. Thus, a person of ordinary skill would be motivated to combine black cohosh and astragalus together to treat arthritis.

Claims 42-44 lack an inventive step under PCT Article 33(3) as being obvious over US Pat. No. 5,629,154.

US '154 teaches a method of detecting telomerase activity using the TRAP assay. The assay can use keratinocytes. The reference does not specifically teach testing plant extracts for telomerase activity, but the reference does teach that the assay can be used to test any material to look for telomerase regulators. Thus, it would be an obvious modification of the reference to use the TRAP assay to test any compound, including plant extract, for telomerase activity.

Claims 1-42 meet the criteria set out in PCT Article 33(4), and thus claims 1-42 industrial applicability because the subject matter claimed can be made or used in industry.